AMENDMENTS TO THE CLAIMS

Claims 1-36 (Cancelled)

Claim 37 (Currently Amended) An information recording medium comprising at least a recording layer that records and/or reproduces information through irradiation with a laser beam or application of an electric current, and a dielectric layer,

wherein the dielectric layer comprises M1 (provided that M1 is at least one element selected from Sc, ~~La,~~ Gd, Dy and Yb), M2 (provided that M2 is at least one element selected from Zr, Hf and Si) and O, such that the dielectric layer is not comprised of S and is not comprised of F.

Claim 38 (Currently Amended) An information recording medium comprising at least two information layers, wherein at least one information layer comprises at least a recording layer that records and/or reproduces information through irradiation with a laser beam or application of an electric current, and a dielectric layer,

wherein the dielectric layer comprises M1 (provided that M1 is at least one element selected from Sc, ~~La,~~ Gd, Dy and Yb), M2 (provided that M2 is at least one element selected from Zr, Hf and Si) and O, such that the dielectric layer is not comprised of S and and is not comprised of F.

Claim 39 (Cancelled)

Claim 40 (Previously Presented) The information recording medium according to Claim 37, wherein the dielectric layer further comprises M3 (provided that M3 is at least one element selected from Al, Ga, Mg, Zn, Ta, Ti, Ce, In, Sn, Te, Nb, Cr, Bi, Al, Ge, N and C).

Claim 41 (Previously Presented) The information recording medium according to Claim 37, wherein the dielectric layer is represented by a composition formula $M1_aM2_bO_{100-a-b}$ (provided that $10 < a < 40$ and $0 < b < 25$ (atom %)).

Claim 42 (Cancelled)

Claim 43 (Previously Presented) The information recording medium according to Claim 40, wherein the dielectric layer is represented by a composition formula $M1_eM2_fM3_gO_{100-e-f-g}$ (provided that $5 < e < 40$, $0 < f < 25$, $0 < g < 85$ and $25 < e+f+g < 95$ (atom %)).

Claim 44 (Previously Presented) The information recording medium according to Claim 37, wherein the dielectric layer comprises $M1_2O_3$.

Claim 45 (Previously Presented) The information recording medium according to Claim 37, wherein the dielectric layer is represented by $M1_2O_3$–$M2O_2$.

Claim 46 (Previously Presented) The information recording medium according to Claim 44, wherein the dielectric layer further comprises D (provided that D is at least one compound

selected from Al_2O_3, Ga_2O_3, MgO, ZnO, Ta_2O_5, TiO_2, CeO_2, In_2O_3, SnO_2, TeO_2, Nb_2O_5, Cr_2O_3, Bi_2O_3, AlN, Cr–N, Ge–N, Si_3N_4 and SiC).

Claim 47 (Previously Presented) The information recording medium according to Claim 45, wherein the dielectric layer is represented by a composition formula $(M1_2O_3)_x(M2O_2)_{100-x}$ (provided that $20 \leq x \leq 95$ (mol%)).

Claim 48 (Previously Presented) The information recording medium according to Claim 46, wherein the dielectric layer is represented by a composition formula $(M1_2O_3)_y(D)_{100-y}$ (provided that $20 \leq y \leq 95$ (mol%)).

Claim 49 (Previously Presented) The information recording medium according to Claim 46, wherein the dielectric layer is represented by a compositional formula $(M1_2O_3)_z(M2O_2)_w(D)_{100-z-w}$ (provided that $20 \leq z \leq 90$, $5 \leq w \leq 75$ and $25 \leq z+w \leq 95$ (mol%)).

Claim 50 (Previously Presented) The information recording medium according to Claim 37, wherein the recording layer goes through a phase-change between a crystalline phase and an amorphous phase.

Claim 51 (Previously Presented) The information recording medium according to Claim 50, wherein the recording layer comprises Ge, Te, and at least one element selected from Sb, Bi, In and Sn.

Claim 52 (Previously Presented) The information recording medium according to Claim 51, wherein the recording layer is represented by any of (Ge–Sn)Te, GeTe–Sb_2Te_3, (Ge–Sn)Te–Sb_2Te_3, GeTe–Bi_2Te_3, (Ge–Sn)Te–Bi_2Te_3, GeTe–$(Sb–Bi)_2Te_3$, (Ge–Sn)Te–$(Sb–Bi)_2Te_3$, GeTe–$(Bi–In)_2Te_3$ and (Ge–Sn)Te–$(Bi–In)_2Te_3$.

Claim 53 (Previously Presented) The information recording medium according to Claim 37, further comprising an interface layer between the dielectric layer and the recording layer.

Claim 54 (Previously Presented) The information recording medium according to Claim 53, wherein the interface layer comprises O, at least one element selected from Zr, Hf, Y and Si, and at least one element selected from Ga, In and Cr.

Claim 55 (Previously Presented) The information recording medium according to Claim 53, wherein the interface layer comprises at least one oxide selected from ZrO_2, HfO_2, Y_2O_3 and SiO_2, and at least one oxide selected from Ga_2O_3, In_2O_3 and Cr_2O_3.

Claim 56 (Previously Presented) The information recording medium according to Claim 37, wherein M1 is Dy.

Claim 57 (Previously Presented) The information recording medium according to Claim 37, wherein M1 includes Dy and the dielectric layer includes Y.

Claim 58 (Currently Amended) A method for manufacturing an information recording medium, the method comprising at least forming a recording layer and forming a dielectric layer,

wherein a sputtering target is used in forming the dielectric layer, the dielectric layer comprising at least O, M1 (provided that M1 is at least one element selected from Sc, ~~La,~~ Gd, Dy and Yb), and M2 (provided that M2 is at least one element selected from Zr, Hf and Si), such that the dielectric layer is not comprised of S and is not comprised of F.

Claim 59 (Currently Amended) A method for manufacturing an information recording medium, the method comprising forming at least two information layers,

wherein at least one information layer of the at least two formed information layers includes a recording layer and a dielectric layer, and

wherein a sputtering target is used in forming the dielectric layer, the dielectric layer comprising at least O, M1 (provided that M1 is at least one element selected from Sc, ~~La,~~ Gd, Dy and Yb), and M2 (provided that M2 is at least one element selected from Zr, Hf and Si), such that the dielectric layer is not comprised of S and is not comprised of F.

Claim 60 (Cancelled)

Claim 61 (Previously Presented) The method for manufacturing an information recording medium according to Claim 58, wherein the sputtering target used in forming the dielectric layer further comprises M3 (provided that M3 is at least one element selected from Al, Ga, Mg, Zn, Ta, Ti, Ce, In, Sn, Te, Nb, Cr, Bi, Al, Ge, N and C).

Claim 62 (Previously Presented) The method for manufacturing an information recording medium according to Claim 58, wherein the sputtering target used in forming the dielectric layer is represented by a composition formula $M1_hM2_iO_{100-h-i}$ (provided that $5 < h < 45$ and $0 < i < 30$ (atom %)).

Claim 63 (Cancelled)

Claim 64 (Previously Presented) The method for manufacturing an information recording medium according to Claim 61, wherein the sputtering target used in forming the dielectric layer is represented by a composition formula $M1_lM2_mM3_nO_{100-l-m-n}$ (provided that $0 < l < 45$, $0 < m < 30$, $0 < n < 90$ and $20 < l+m+n < 100$ (atom %)).

Claim 65 (Previously Presented) The method for manufacturing an information recording medium according to Claim 58, wherein the sputtering target used in forming the dielectric layer comprises $M1_2O_3$.

Claim 66 (Previously Presented) The method for manufacturing an information recording medium according to Claim 58, wherein a composition of the sputtering target used in forming the dielectric layer is represented by $M1_2O_3$–$M2O_2$.

Claim 67 (Previously Presented) The method for manufacturing an information recording medium according to Claim 65, wherein the sputtering target used in forming the dielectric layer

further comprises D (provided that D is at least one compound selected from Al_2O_3, Ga_2O_3, MgO, ZnO, Ta_2O_5, TiO_2, CeO_2, In_2O_3, SnO_2, TeO_2, Nb_2O_5, Cr_2O_3, Bi_2O_3, AlN, Cr–N, Ge–N, Si_3N_4 and SiC).

Claim 68 (Previously Presented) The method for manufacturing an information recording medium according to Claim 66, wherein the sputtering target used in forming the dielectric layer is represented by a composition formula $(M1_2O_3)_s(M2O_2)_{100-s}$ (provided that $15 \leq s < 100$ (mol%)).

Claim 69 (Previously Presented) The method for manufacturing an information recording medium according to Claim 67, wherein the sputtering target used in forming the dielectric layer is represented by a composition formula $(M1_2O_3)_t(D)_{100-t}$ (provided that $15 \leq t < 100$ (mol%)).

Claim 70 (Previously Presented) The method for manufacturing an information recording medium according to Claim 67, wherein the sputtering target used in forming the dielectric layer is represented by a composition formula $(M1_2O_3)_u(M2O_2)_v(D)_{100-u-v}$ (provided that $15 \leq u \leq 95$, $0 < v \leq 80$ and $15 < u+v < 100$ (mol%)).

Claim 71 (Previously Presented) The method for manufacturing an information recording medium according to Claim 58, wherein the method further comprises forming an interface layer between the forming of the recording layer and the forming of the dielectric layer.

Claim 72 (Previously Presented) The method for manufacturing an information recording medium according to Claim 58, wherein either Ar gas is used or a gas mixture of Ar gas and O_2 gas is used when forming the dielectric layer.